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**Descriptions of DIURNAL LEPIDOPTERA found
within the United States.**

BY WM. H. EDWARDS.

Satyrus Wheeleri, n. sp.

Male.—Expands 2.3 to 2.5 inches. Upper side light yellow-brown, clouded with dark brown, especially on the disks of each wing, the dark portion forming a broad band on primaries, a narrow one on secondaries, well defined outwardly but within fading insensibly into the ground color; hind margins edged by a pale line, preceded by a dark one, and at some distance by a dark common stripe, sometimes macular on secondaries; primaries have a broad extra-discal band as in *Alope*, but pale brown, in which are two large black ocelli, the upper one (in all cases under inspection) sub-pyriform, as if two spots of unequal size had been compressed into one, and encloses two white points; the lower ocellus is larger, rounded, with white points; both are enclosed in narrow yellow rings; secondaries usually have three ocelli, but sometimes the one next anal angle is wanting; these spots are placed on the sub-median and two next preceding interspaces; the middle one is round, about one-tenth inch in diameter, with white point and yellow ring; the others are usually mere black dots.

Under side whitish, covered with abbreviated brown streaks, most dense from base to middle of disk on primaries, but equally distributed over whole of secondaries, both wings being crossed by an irregular extra-discal brown stripe, besides which secondaries have a second similar stripe nearer the base; the ocelli of primaries as on upper side, but surrounded by broader and paler rings which coalesce; secondaries have three ocelli near costa, the two outer ones small, round, the other oval, all with white dots and yellow circlets; the three ocelli next anal angle distinct, also with dots and circlets.

Body yellow-brown; legs same; palpi darker; antennæ brown with fine white annulations; club ferruginous.

Female, not known.

From nine males taken by the naturalists of Lieutenant Wheeler's Expedition, 1871, between the Cascade and Rocky Mountains, but the precise locality not indicated. This fine species is one of the largest, equalling the largest specimens of *Alope*, and may at once be distin-

guished from any other North American *Satyrus* yet known by its pale color and clouded surface, and by the whitish color of under surface, and conspicuous brown transverse stripes. The ocelli also are different from those of our other large species, having small white pupils, and the upper one on primaries being peculiar in shape and doubly pupillated.

***Thecla Crysalus*, n. sp.**

Male.—Expands 1.5 inch. Upper side purple, the hind margins of both wings and costal of secondaries broadly edged with black; the costal margin of primaries narrowly, and depending from this, on the disk, is a large sub-rectangular black spot; within the marginal border of primaries, next inner angle, a fulvous maculate band terminating above on the lower median interspace, broken into four spots, the upper one round and separated by a little space from the next; this last is duplex and one or both parts shows a black central spot; at the angle a triangular spot; at anal angle of secondaries are two oval fulvous spots with black pupils; tail long, black, tipped with white; fringes grey, becoming whitish at anal angle.

Under side brown with a faint tint of purple; both wings edged by a pale line that becomes distinct and white on posterior half of secondaries; primaries have a sub-marginal macular black band preceded by a white line and corresponding in position to the anterior edge of the black border of upper side; the fulvous spots repeated; a second band of dark brown, extra-discal and continuous, extends from costa to lower median and if protracted would strike the inner angle; this band is edged posteriorly by white; on the arc a brown bar, edged on either side by white; secondaries have a marginal series of spots, the one on lower median interspace fulvous anteriorly, replaced next margin by brown on which are thickly sprinkled metallic blue scales, and sending a fulvous spur up the abdominal margin, the spot in second median interspace large, fulvous, with black pupil, separated from the margin as on the spot before described; sometimes on the upper median interspace are a few fulvous scales, but often not, and the whole space is irrorated with the blue and white scales; beyond to outer angle the spots are obsolete, a few scattered blue scales only appearing; at anal angle a round black spot; anterior to the marginal spots is a black crenated line, only distinct over the fulvous spots, preceded by a line of metallic blue which is replaced by white towards outer angle; on the disk a blackish-brown line, bordered posteriorly by

a white line, crosses the entire wing, nearly straight from costal edge to first branch of median, then zigzag and terminating high up abdominal margin; on arc a bar like that on primaries and towards base a dark brown stripe edged anteriorly by white, extending from costal to median nervures.

Body black above, white beneath; legs and palpi white; antennae annulated black and white; club black, tip ferruginous.

Female.—1.6 inch. The black costal spot enlarged and extended to middle of hind margin, cutting off a sub-apical purple space; otherwise as in male. On under side the bands are heavier and more distinct.

From 2 ♂, 1 ♀, taken at Lake Paso, 7th August, 1871, by Mr. J. H. Allen, and in the collection of the Museum of Comp. Zoology, Cambridge.

Lemonias Cythera, n. sp.

Male.—Expands 1.1 inch. Upper side of primaries copper-red except a broad band on hind margin and at apex, where the color is fuscous; of secondaries fuscous, both wings have a sub-marginal row of points on the fuscous ground posterior to which are small round black spots, distinct on secondaries, hardly so on primaries; primaries have a large, irregular, white spot in middle of cell, edged on either side by black; a smaller spot below this on inner margin and a white point on same margin near base, both edged basally by black; there is also a black point in cell near base; across the disk a sinuous black stripe, on the outer side of which, near costa, are two white spots and a third in the second median interspace; secondaries have a white spot on costa, another in cell, a smaller one near abdominal margin, the three being in line; also a white point between the last mentioned spot and base; two small copper-red spots in cell near base, and a large one across the middle of the disk, not reaching either margin, its outer edge rounded and parallel to hind margin, and its inner edge excavated by a deep sinus opposite the cell; fringes long, alternate fuscous and white.

Under side of primaries deep orange from base to margin; the spots repeated; the discal row complete, six spots in all, but the two middle ones minute, each edged basally with black; on hind margin a series of abbreviated white stripes on the interspaces, starting from the marginal edge, each of which includes a blackish point.

Secondaries light brown on disk, white next base, the white shade passing through and beyond the cell and also along abdominal margin; along hind margin a series of white spots, rather indistinct, some of which include black points; across the disk a sinuous row of white spots except where the ground is white, each spot edged basally by black; within the white spaces are black marks or points, on line with the black edges of the spots; beyond the cell, on the white ground, two black marks form a V, pointing to base, and not quite, joining at the angle; several black points near base.

Body fuscous above, collar fulvous; beneath pure white; legs and palpi white; antennæ annulated black and white, club brown above white below; tip fulvous.

From three males taken in Arizona by Lieut. Wheeler's Expedition, 1871.

Hesperia Chusca, n. sp.

Male.—Expands 1 inch. Upper side yellow fulvous, with a narrow fuscous serrated border to both wings; two of the serratures wanting opposite cell of primaries; stigma velvety black, thick, curved, presenting convex side to base, and having at its lower extremity a small separated (or nearly) spot in the direction of base; a small fuscous patch posterior to stigma.

Under side pale, secondaries rather ochraceous; immaculate.

From a single ♂ brought from Arizona by Lieut. Wheeler's Expedition of 1871.

Hesperia Yuma, n. sp.

Male.—Expands 1.3 inch. Upper side ochre-yellow, immaculate; stigma long, narrow, nearly straight, covering the whole arc; costal edge of secondaries fuscous.

Under side paler, fuscous at base of primaries; otherwise immaculate.

Body fuscous above, ochraceous below; legs brown; palpi ochraceous; antennæ fuscous above, ochraceous below, and the club to tip is brownish-yellow.

From a single male received from Arizona by Lieut. Wheeler's Expedition of 1871.

Lycæna Melissa, n. sp.

Male.—Expands 1.1 inch. Upper side clear pruinose-blue, silvery on costa of primaries; hind margins edged with black, sometimes very

narrowly on both wings, but sometimes secondaries are rather broadly edged, and the margin of the blue ground is erose or irregularly crenate.

Under side uniform whitish buff, slightly bluish at base of secondaries; both wings edged by a black line, which is a little expanded on each interspace, especially on secondaries; primaries have a row of brown marginal points, above each of which is an orange spot; of these the second and third from inner angle are largest, the others of nearly equal size; each of these orange spots is surmounted by a straight black bar; across the disk a bent row of six black spots, nearly equal, rounded or sub-ovate, the upper spot at some distance from costal edge, each edged by a shade paler than the ground; on arc a reniform spot; secondaries have a complete sub-marginal row of large orange spots, at the outer edge of each of which is a black spot, nearly or quite covered with metallic pale green scales; and over each orange spot is a black crescent; a doubly bent row of small rounded black spots crosses the disk; on arc a straight spot, and three small round spots half way between this and base, on a straight transverse line, besides a fourth spot, minute, on abdominal margin, a little in advance of the line.

Body above blue, beneath white slightly bluish; legs same color; palpi white with black hairs in front, the upper joint black with white tip; antennæ annulated black and white, club fuscous, reddish on under side at tip.

Female.—Expands 1.2 inch. Upper side sometimes dark brown, sometimes, often with dark metallic scales sprinkled over base of secondaries pale yellow-brown; both wings have a complete orange band, which on primaries is of even width, though differing in individuals, sometimes being quite broad, arcuate posteriorly, having next the margin a row of brown semi-circular spots; sometimes these are confluent and then present the appearance of a band, with wavy anterior edge; the orange band of secondaries is broadest on middle of the limb, and lessens either way to its extremities, enclosing posteriorly a marginal row of round fuscous spots, between which and the edge of margin is a strip of the brown ground; under side sometimes similar to male, but sometimes quite ochraceous.

From many specimens taken in Colorado by Mr. Mead, in the summer of 1871. I have also received this species from Nevada, and from Arizona by Lieut. Wheeler's Expedition of 1871.

L. Melissa belongs to same group with *Scudderii*, and *L. Anna* and *Armon*.

It may be distinguished from *Scudderii*, of which species the male is very like *Melissa* above, by the presence of orange spots on primaries below, in *Melissa*, and wanting in the other, and by the greater curvature of the discal row of spots on primaries. The females differ widely, that of *Scudderii* being blackish with anal ocelli, while *Melissa* is brown with a band of orange to both wings.

It also resembles *Anna* ♂ in the color of primaries above, but is a smaller species, is of a different color beneath, *Anna* being white. It is also slightly marked, the marginal spots on primaries being faint, without orange, and those of secondaries separated, the orange spots lunular, faint, each edged above with a black spot more deeply convex; the female of *Anna* is also brown, but the orange band is broken up on secondaries into separate narrow crescents deeply bent and their limbs prolonged nearly to margin, enclosing fuscous spots; on primaries a very narrow band of lunations similar to secondaries, but less extensive; *Anna* ♀ beneath is a dark uniform yellow-brown, with no orange on primaries and less on secondaries than the male has.